REMARKS

Claim 1-75 are currently pending. Claim 3 has been amended. New dependent claims 46-75 have been added herein to round out the scope of protection being sought. The specification has been amended in several instances to update certain references to U.S. patent literature. The specification has also been amended at page 6 for readability by making explicit what was already implicit and readily understood by those of ordinary skill in the art, namely, that modulations of carrier waves provide information content. The allowance of claims 12-43 and 45 and the indication of allowable subject matter in claims 3-9 are acknowledged with appreciation. Reconsideration is respectfully requested.

The Office Action includes an objection to claims 3-9 for an informality. Claim 3 has been amended as suggested by the Office, and withdrawal of the objection is respectfully requested.

The Office Action includes a rejection of claims 1, 2, 10, 11 and 44 under 35 U.S.C. § 102(b) as allegedly being anticipated by the Butler et al. publication (WO 97/01926). This rejection is respectfully traversed.

Independent claim 1 recites a method of providing corrected values of gain and level coefficients of a set of correction coefficients for a scanning detector array, the scanning detector array comprising a plurality of detector channels. The method comprises the steps of modifying first values of the gain and level coefficients using at least one frame of image data collected by the scanning detector array from out-of-focus multiple-temperature imagery, and determining updated values of the gain and level coefficients using a scene-based non-uniformity correction (SBNUC) routine applied to scene data corresponding to focused scene imagery. Independent

claim 44 recites an apparatus comprising a processor unit coupled to a scanning detector array wherein the processor unit is configured to carry out the steps of the above-noted method.

In contrast, the Butler et al. publication does not disclose the combination of subject matter recited in claims 1 and 44. For example, contrary to the Office's suggestion, the Butler publication does not disclose modifying first values of gain coefficients or determining updated values of gain coefficients as recited in claims 1 and 44. The Butler et al. publication discloses dynamic correction of offset coefficients (i.e., level coefficients) for a focal plane array (see, Abstract), but not dynamic correction of gain coefficients.

Contrary to the Office's suggestion, modifying and updating gain coefficients are not disclosed in the Abstract, in the last full paragraph on page 1, in the paragraph bridging pages 13 and 14, in the last full paragraph on page 14, or in the first two full paragraphs on page 15 of the Butler et al. publication. Rather, the Abstract of the Butler et al. publication discloses dynamic correction of offset values. The last full paragraph on page 1 of the Butler et al. publication discloses that output from each element (i.e., data from each element of the detector array) can be offset corrected and then gain corrected, but this section does not disclose that the gain coefficients are themselves modified or updated. The paragraph bridging pages 13 and 14 of the Butler et al. publication disclose computing fine and course offset coefficients, but this section is silent with regard to gain coefficients. The last full paragraph on page 14 of the Butler et al. publication discloses the updating of offset coefficients, but is silent with regard to gain coefficients. The first two full paragraphs on page 15 of the Butler et al. publication disclose, among other features, a gain

controller 304 that provides gain coefficients for offset corrected data, a memory 610 that provides data including a gain compensation factor, and a multiplier 626 that multiplies offset corrected data with an appropriate gain correction factor, but this section does not disclose that the gain coefficients are themselves modified or updated.

In summary, the Butler et al. publication discloses dynamic correction of offset coefficients (i.e., level coefficients) for a focal plane array, but not dynamic correction of gain coefficients. Withdrawal of the rejection and allowance of claims 1 and 44 are respectfully requested for at least this reason. Claims 2, 10 and 11 are allowable at least by virtue of dependency.

The Office Action includes a rejection of claims 10 and 11 under 35 U.S.C. § 103(a) as allegedly being unpatentable over the Butler et al. publication in view of the Knauth et al. patent. This rejection is respectfully traversed. In particular, as noted above, claims 10 and 11 are allowable at least by virtue of dependency. In addition, the Office's reliance on the Knauth et al. patent does not make up for the deficiency of the rejection of claims 1 and 44. Withdrawal of the rejection and allowance of claims 10 and 11 are respectfully requested.

New dependent claims 46-75 have been added to round out the scope of being protection sought. These claims recite subject matter in the context of an apparatus and a computer readable carrier (supported at least at paragraph 30) that parallels subject matter already recited in various method claims. Claims 46-75 are allowable at least by virtue of dependency, and allowance of the same is respectfully requested.

In light of the above, withdrawal of the rejections and allowance of this application are respectfully requested. Should there be any questions in connection with this application, the Office is invited to contact the undersigned at the number below.

Respectfully submitted,

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